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(54) **MAGNETIC CONNECTOR FOR
ELECTRONIC DEVICE**

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(57) **ABSTRACT**

(51) **Int. Cl.**

H01R 13/60 (2006.01)

(52) **U.S. Cl.** **439/39; 439/218**

(58) **Field of Classification Search** **439/38, 439/218, 217, 700, 39**

See application file for complete search history.

An electrical plug and receptacle relying on magnetic force to maintain contact are disclosed. The plug and receptacle can be used as part of a power adapter for connecting an electronic device, such as a laptop computer, to a power supply. The plug includes electrical contacts, which are preferably biased toward corresponding contacts on the receptacle. The plug and receptacle each have a magnetic element. The magnetic element on one or both of the plug and receptacle can be a magnet, which is preferably a permanent rare earth magnet although electromagnets may also be used. The magnetic element on the plug or receptacle that does not include a magnet is composed of ferromagnetic material. When the plug and receptacle are brought into proximity, the magnetic attraction between the magnet and its complement, whether another magnet or a ferromagnetic material, maintains the contacts in an electrically conductive relationship.

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57 Claims, 9 Drawing Sheets

